Appendix C23-D

HMIS CODING AND STORAGE REQUIREMENTS

Table C23-D-1

HAZARD CHARACTERISTIC CODE FOR HAZARDOUS MATERIAL GROUPS

The Hazard Characteristic Code (HCC) is a two-digit alpha-numeric code that is used to provide a means of categorizing hazardous material (HM). HCCs are assigned by trained scientific or engineering personnel, thereby uniformly identifying HM that is managed by all government activities. HCCs allow personnel to properly receive, handle, store, and process HM. In particular, the HCC allows the user to determine which materials are compatible for storage with other materials. In addition, HCCs can be used to simplify spill response and cleanup, processing of HM during recoupment operations, and assist in the identification of potential hazardous wastes. The HCC serves as an identifier for automated processing of HM transactions and space utilization management.

HAZARD GROUP	HCC
1. Radioactive Materials	
a. Licensable	A1
b. Licensable, Low Risk (encapsulated sources)	A2
c. License Exempt	A3
d. License Exempt, Authorized	A4
2. Corrosive Liquids	
a. Corrosive, DOT, Acid	C1
b. Corrosive, DOT, Alkali	C2
c. Acid, Low Risk (2 < pH < 7)	C3
d. Alkali, Low Risk (7 < pH < 12.5)	C4
3. Oxidizers	
a. Oxidizer (explosive reaction or causes a severe increase in burning rate)	D1
b. Oxidizer, Low Risk (increases burning rate of combustibles)	D2
c. Oxidizer (HCC D1) and Poison (HCC T1, T2, T3, T4, T5, or T6)	D3
d. Oxidizer (HCC D1) and Corrosive (HCC C1 or C2)	D4
4. Explosives (See OP4, OP5, and OP2165)	
a. Explosives, Military	E1
b. Explosives, Low Risk (small hazard in event of ignition or initiation during transport)	E2

Table C23-D-1 (Cont'd)

HAZARD GROUP	HCC
5. Flammable/combustible liquids	
a. Flammable, Aerosol	F1
b. Flammable (flashpoint (fp) < 0°F)	F2
c. Flammable (0°F < fp <73°F)	F3
d. Flammable (73°F < fp <141°F)	F4
e. Flammable (HCCs F2, F3, or F4) and Poison (HCCs T1, T2, T3, T4, or T6)	F5
f. Flammable (HCCs F2, F3, or F4) and Corrosive (HCCs C1 or C2)	F6
g. Flammable solid (excludes explosives and HCCs R1 and R2)	F7
h. Combustible, Liquid (141°F < fp < 200°F)	F8
6. Compressed Gases	
a. Gas (Nonflammable) Poison	G1
b. Gas, Flammable, Non Toxic	G2
c. Gas, Nonflammable, Non Toxic	G3
d. Gas, Nonflammable, Oxidizer (requires oxidizer label)	G4
e. Gas, Nonflammable, Corrosive (C1 or C2)	G5
f. Gas, Nonflammable, Poison, Corrosive (C1 or C2)	G6
g. Gas, Nonflammable, Poison, Oxidizer	G7
h. Gas, Flammable, Poison	G8
i. Gas, Nonflammable, Poison, Corrosive, Oxidizer	G9
7. Miscellaneous Materials (present minimal hazard during transport or storage)	
a. Miscellaneous Flammable Materials	J1
b. Miscellaneous Flammable Solids	J2
c. Miscellaneous Oxidizing Materials	J3
d. Miscellaneous Organic Peroxides	J4
e. Miscellaneous Poisonous Materials	J5
f. Miscellaneous Corrosive Materials	J6
g. Miscellaneous Class 9 (anesthetic, noxious, or other similar properties which could cause discomfort to flight crews. Formerly called Irritants)	J7
h. Miscellaneous ORM-E (hazardous under CERCLA but not classed under other HCC)	J8
8. Medical Substances	
a. Infectious Materials (micro-organism or its toxin)	K1
b. Cytotoxic Drugs	K2

Table C23-D-1 (Cont'd)

HAZARD GROUP	HCC
9. Magnetized Material	M1
10. Nonhazardous (material which by chemical name may be perceived to be hazardous)	N1
11. Peroxides	
a. Peroxide, Organic (present deflagration, severe fire hazard, or fire hazard)	P1
b. Peroxide, Organic, Low Risk (burns as an ordinary combustible, but with minimal reactivity hazard)	P2
12. Reactive Chemicals	
a. Reactive Chemical, Flammable (spontaneously combustible)	R1
b. Water Reactive Chemical (spontaneously combustible when wet)	R2
13. Toxic Chemicals	
a. DOT Poison - Inhalation Hazard	T1
b. UN Poison, Packing Group I (Great Danger)	T2
c. UN Poison, Packing Group II (Medium Danger)	T3
d. Poison, Food Contaminant (Minor Danger)	T4
e. Pesticide, Low Risk	T5
f. Health Hazard (hazardous, not classified elsewhere)	T6
g. Carcinogen	T7
14. Marine Pollutant	W1

Table C23-D-2

SHIPBOARD STORAGE COMPARTMENTS

HCC CODES	
C1, C3	ACID STOREROOM
C1, C3	ACID LOCKER (ORGANIC) - SPECIAL DESIGN LOCATED INSIDE FLAMMABLE LIQUID STOREROOM
C1, C3	ACID LOCKER (INORGANIC) - SPECIAL DESIGN LOCATED INSIDE FLAMMABLE LIQUID STOREROOM
C1, C3	ACID LOCKER (MEDICAL)
C1	STORAGE BATTERY SHOP (LEAD ACID)
C2, C4	BASES (ORGANIC) LOCKER - LOCATED WITHIN DRY GENERAL STORAGE
C2, C4	BASES (INORGANIC) LOCKER - LOCATED WITHIN DRY GENERAL STORAGE
C2, C4	STORAGE BATTERY SHOP (ALKALINE) OR AVIATION ALKALINE BATTERY SHOP
F1 thru F6, F8	ALCOHOL STOREROOM
F1 thru F6, F8	ALCOHOL LOCKER
F1 thru F6, F8	FLAMMABLE LIQUID LOCKER
F1 thru F6, F8	FLAMMABLE LIQUID CABINET
F1 thru F8	FLAMMABLE LIQUID STOREROOM
F1 thru F6, F8	FLAMMABLE LIQUID READY SERVICE STOREROOM
F1 thru F6, F8	FLAMMABLE LIQUID ISSUE ROOM
F1 thru F6, F8	AVIATION FLAMMABLE LIQUID READY ISSUE ROOM
F1 thru F6, F8	AVIATION PAINT AND FLAMMABLE LIQUID READY ISSUE ROOM
F1 thru F6, F8	AVIATION STOREROOM (FLAMMABLES)
F8	AVIATION STOREROOM (LUBRICANTS)

Table C23-D-2 (Cont'd)

HCC CODES	
F1 thru F6, F8	PAINT MIXING AND ISSUE ROOM/LOCKER
F1 thru F6, F8	PAINT AND REFINISHING ROOM
F1 thru F6, F8	SUPPLY DEPARTMENT STOREROOM (FLAMMABLE LIQUIDS)
F8	SUPPLY DEPARTMENT STOREROOM (AVIATION LUBRICATION OIL)
G3, G4	SUPPLY DEPARTMENT GAS CYLINDER STOREROOM (R
G8	SUPPLY DEPARTMENT GAS CYLINDER STOREROOM (ACETYLENE)
G2, G8	SUPPLY DEPARTMENT GAS CYLINDER STOREROOM (FLAMMABLE)
G1, G3	SUPPLY DEPARTMENT GAS CYLINDER STOREROOM (CO_2 AND HALON)
G3	SUPPLY DEPARTMENT GAS CYLINDER STOREROOM (HELIUM)
G4, G5	SUPPLY DEPARTMENT GAS CYLINDER STOREROOM (OXYGEN AND CHLORINE)
G3	SUPPLY DEPARTMENT GAS CYLINDER STOREROOM (INERT)
G3, G4	SUPPLY DEPARTMENT GAS CYLINDER STOREROOM (OXYGEN AND NITROGEN)
G2, G8	SUPPLY DEPARTMENT GAS CYLINDER STOREROOM (WEATHER STOWAGE)
C1, C3	CARGO STOREROOM (BULK ACID AND CHEMICAL)
F1 thru F8	CARGO STOREROOM (FLAMMABLE LIQUIDS)
G2, G8	CARGO STOREROOM (FLAMMABLE GAS CYLINDERS)
G3	CARGO STOREROOM (INERT GAS CYLINDERS)
F8	CARGO STOREROOM (LUBRICATING OIL)
J6	CARGO STOREROOM (DRY CELL BATTERY)
J1 thru J8	CARGO STOREROOM (MEDICAL SUPPLIES)

Table B3-D-2 (Cont'd)

HCC CODES

GENERAL STORAGE AREAS

VARIOUS CODES; (including remainder of HCC Codes)	SUPPLY DEPARTMENT STOREROOMS (BULK) ITEMS STORED BY COMPATIBLE GROUP

MISCELLANEOUS STORAGE COMPARTMENTS

D1	SUPPLY DEPARTMENT CALCIUM HYPOCHLORITE STOREROOM/LOCKER
F1 thru F6, F8, C3, C4	CLEANING GEAR LOCKER/ROOM
D1	BROMINE FEEDER CARTRIDGE LOCKER
J6, T1	MERCURY LOCKER
J1 thru J8	POISON ANTIDOTE LOCKER
D1	SODIUM NITRATE LOCKER
J1 thru J8	MEDICAL LOCKER
D1	CHLORATE CANDLE LOCKER
F7	LITHIUM BATTERIES LOCKER
F1 thru F6, F8	PAINT LOCKER
F1 thru F6, F8	PAINT STOREROOM
A1 thru A4	RADIOACTIVE MATERIAL AREA (in accordance with NAVSUP Manual 485, Afloat Supply Procedures and NAVSUP Manual 284, Storage and Materials Handling)

SHIPBOARD STORAGE EXCEPTIONS

1. **Materials not to be used or stored aboard ships**. The following materials are prohibited from use or storage aboard all ships except where authorized in medical department pharmacies, clinical and chemical laboratories, and as cargo.

Trichlorethylene (to be used only by ships having equipment designed for its use)
Benzene (Benzol)
Beta Naphthylamine
Carbon Tetrachloride
DDT Xylene Emulsion
Hydrocyanic Gas
Insecticides, DDT (prohibited items)
Methyl Bromide
Plastic Trash Cans
Dry Cleaning Solvent (Stoddard Solvent) Type I of FED SPEC P-D-680
Tetrachloroethane

2. **Materials not to be stored aboard ships**. The following materials are prohibited from storage aboard ships.

Gasoline (except that carried topside in a suitable jettison rack)
Sulfuric acid, electrolyte - storage batteries - class 1 minimum specific gravity 1.8354 (except for tenders that have fresh water deluge showers)